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| 10/612,288 | 07/03/2003 | Fabrice Diehl | PET-2092 | 5777 |

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EXAMINER

BROWN, JENNINE M

ART UNIT PAPER NUMBER

1755

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,288

Applicant(s)

DIEHL ET AL.

Examiner

Jennine M. Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Transitional After Final Practice

Since this application is eligible for the transitional procedure of 37 CFR 1.129(a), and the fee set forth in 37 CFR 1.17(r) has been timely paid, the finality of the previous Office action is hereby withdrawn pursuant to 37 CFR 1.129(a). Applicant's after final amendment of 6/7/05 was entered and subsequent amendments to the claims after final filed on 7/20/05 have also been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21 and 3-10, 12-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Eijsbouts, et al. (US 6540908 B1).

Eijsbouts, et al. disclose a hydrotreating catalyst comprising at least one element of group VIB - group VIII of the periodic table (col. 1, l. 45-57; col. 5, l. 38-51) deposited on a porous substrate (col. 2, l. 65-col. 3, l. 5; col. 5, l. 12-37) and at least one organic compound of the Markush group listed (formula I meets the limitations claimed col. 4, l. 41-col. 5, l. 11) wherein said catalyst is in sulfurized form (col. 4, l. 6-

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40). Sonnemans, et al. disclose a method of making said catalyst (col. 9, l. 61-col. 11, l. 8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21 and 3-10, 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lapidus, et al. (US 6331574 B1) in view of Allain, et al. (US 3928443 A) and further in view of Eijsbouts, et al. (EP 1043069).

See entire reference. Lapidus, et al. disclose a process for the preparation of high activity carbon monoxide hydrogenation catalysts and compositions thereof. Metals are impregnated into a support which is then calcined to form oxides then treated with a solution of a chelating compound. The catalyst comprises a porous support such as a refractory inorganic oxide support, such as a crystalline

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aluminosilicate, natural or synthetic zeolite, alumina, silica, silica-alumina or titania (col. 2, l. 23-28; col. 4, l. 4-12) The support is impregnated with an aqueous Group VIIB or Group VIII metal or metals (col. 2, l. 28-34; col. 4, l. 13-23). The support is then calcined (col. 2, l. 35; col. 4, l. 61-66). Relative ratios of deposition are given (col. 2, l. 38-42). The support is then contacted and treated with a solution of chelating compound, preferably a poly or multidentate chelating compound (col. 2, l. 44-52; col. 5, l. 33-col. 6, l. 42). Amines are given such as ethylene diamine, alkyl diamines, diethylenetriamines, dialkyltriamines, acetylacetone, alkyl dicarboxylic acids and alkali salts of carboxylic acids (col. 6, l. 3-28).

Although Lapidus, et al. disclose an amine they do not disclose the specific compounds in the Markush group of claim 1. Allain, et al. disclose a copper catalyst which uses amine compounds (diethanolamine col. 10, l. 18; amines – col. 9, l. 40-col. 11, l. 4; aminocarboxylic acids - col. 11, l. 48-63) disclosed both in the prior art reference and those in the Markush group of the instant claims. Therefore Allain, et al. cures the deficiency of Lapidus, et al. by giving an equivalence between the amine disclosed in Lapidus, et al. and those used in the Markush group of the instant claims, therefore it would have been obvious to one of ordinary skill in the art to modify the catalyst of Lapidus, et al. to use any of the amine compounds disclosed in Allain, et al. as multidentate ligands useable in making an active catalytic composition which would be equivalent to that claimed.

Lapidus, et al. in view of Allain, et al. do not disclose sulfiding the hydrotreating catalytic composition or method of making the sulfided hydrotreating catalytic composition. Eijsbouts, et al. cures the deficiency of Lapidus, et al. in view of Allain, et al. by sulfiding the hydrotreating catalyst in order to improve the activity of the catalyst (EP 1043069, page 2, paragraph [0008], last sentence) wherein suitable sulfidation processes are known (paragraph [0013], second sentence). It would have been obvious to one of ordinary skill in the art to take the modified catalyst composition of Lapidus, in view of Allain, et al. and sulfide it so that it would perform better by having better activity.

Response to Arguments

Applicant's arguments filed 7/20/05, with respect to the previous rejection of the claims respectively under Lapidus, et al. in view of Allain, et al. have been considered but after further search and consideration have been modified to include the teachings of sulfiding the catalyst to improve the activity of the uncalcined catalysts as disclosed in EP 1043069, page 2, paragraph [0008], last sentence. Based on the new search, the examiner has vacated the previously allowable subject matter and modified the rejection to include the new limitations based on the subsequently amended claim language. Regarding applicant's arguments about the chelating agent not being explicitly disclosed, the examiner cites US 6291394 B1 in evidence wherein both EDTA and MEA are cited in column 6 at lines 17-18 and are also defined in the previous paragraph (col. 5, l. 1-28) as chelating agents which are used to improve the activity of

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previously known hydrotreating catalysts (col. 1, l. 60), giving the motivation for the combination for combination of the references supra. The substitution is not the metals of the catalyst compound itself but the specific chelating agents which may chelate cobalt. The Lapidus reference can be modified by substituting the specific nitrogenous chelating agents disclosed in Allain, et al. for those disclosed in Lapidus, et al. and as such cures the deficiency of Lapidus, et al. Regarding applicant's assertion that catalytic compositions cannot be used for different and varying processes, the examiner points out to applicant that it is well known that catalytic compositions are used for multiple catalytic processes which on the surface seem unrelated such as those argued by applicant and admitted as such in US 6316382 B1 in paragraph 5, starting at line 64 wherein "[t]he sulphide catalysts obtained in the present invention are used as catalyst for hydrogenation, hydrodenitrogenation, hydrodeoxygenation or hydrodesulphurization of feeds containing aromatic and/or olefinic and/or napthenic and or paraffinic compounds ...". As such the rejection has been modified to include the sulfurization and has been maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

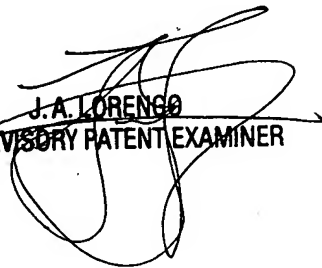
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb


J.A. LORENZO
SUPERVISORY PATENT EXAMINER